

REMARKS

Applicants acknowledge receipt of an Advisory Action dated June 16, 2008. This response and amendment is submitted to supplement the response and amendment submitted on May 30, 2008. In this response, Applicants have amended claim 6 and cancelled claims 7-8 without prejudice or disclaimer. Support for the claim amendments may be found in the specification as originally filed, *inter alia*, on page 14, line 21 – page 15, line 1, and on page 20, lines 22-25. Following entry of this amendment, claim 6 remains pending in the application.

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Rejection Under 35 U.S.C. § 103

On page 6 of the Office Action, the PTO has rejected claim 6 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent 3,015,558 to Grant *et al.* (hereafter “Grant”) as evidenced by Material Hardness in view of Klarstrom. The PTO upholds this rejection in the Advisory Action, stating that “the entire teaching of Klarstrom includes ‘in amounts up to about 0.1 percent,’ which overlaps the claimed range.” Applicants respectfully traverse this rejection for at least the reasons set forth below.

The framework for the objective analysis for determining obviousness under §103 requires:

1. Determining the scope and content of the prior art;
2. Ascertaining the differences between the claimed invention and the prior art;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Considering objective evidence present in the application indicating obviousness

or nonobviousness.

Teleflex, Inc. v. KSR Int’l Co., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

Here, Grant, Material Hardness, and Klarstrom, whether taken individually or in combination, fail to teach or suggest a cutter wherein “wherein the cutter comprises a mirror-finished surface formed by final polishing with a polisher, so that the cutter has an aesthetic property” as recited in claim 6.

As disclosed in Grant, the hardness of a Ni-Cr-Al material greatly varies in accordance with the composition and the heat treating conditions of the material. Grant, Fig. 1. This variation in hardness results in an increased likelihood of cracks occurring during a hot-working operation, reducing the production yield of the cutter. The presently claimed invention addresses these variations and results in a cutter with an improved workability. When the amount of Ca and Mg is too high, the hot workability of the cutter is disadvantageously lowered. As such, the amounts of Ca and Mg are strictly controlled in the presently claimed invention to be “from 0.005 to 0.025 mass percent of Mg; [and] from 0.005 to 0.02 mass percent of Ca.”

Furthermore, because of the hardness and viscosity of the presently claimed invention, knives formed from the presently claimed alloys “can be smoothly ground and polished, and a mirror finished surface can be readily formed.” Specification, page 37, lines 15-18.

Applicants maintain that Klarstrom fails to teach or suggest an alloy where “the total content of P, O, and S is greater than zero and less than or equal to 0.003 mass percent” as recited in claim 6. As noted by the PTO on page 6 of the Office Action, neither Grant or Material Hardness teach or suggest the P, O, and S as presently claimed.

Klarstrom states that N, O, P, and S “may be present in amounts up to about 0.1 percent without substantial harm to the alloys of the present invention, they are preferably present only up to about 0.02 percent each.” Klarstrom, Col. 8, Ins. 34-40. As recited in the present specification, certain combinations of “elements cause a multiplier effect to impair the hot workability.” Specification, page 12, lines 19-24. In order to prevent this impairment of hot workability, the total content of P, O, and S is strictly controlled within the presently claimed invention to be “is greater than zero and less than or equal to 0.003 mass percent.” The amount of up to 0.06 percent P, O, and S in Klarstrom is more than a factor of ten larger than the presently claimed amounts of up to 0.003 mass percent, and would result in a multiplier effect on the impurities, significantly reducing hot workability.

The PTO cannot rely on the statement of Klarstrom that N, O, P, and S “are usually present in small amounts in all alloys.” Klarstrom, Col. 8, Ins. 34-37. This statement does not quantify how much of the elements are “usually present” beyond small amounts, and the exemplary amounts listed in Klarstrom are twenty times and thirty-three times more than the

amounts of the presently claimed invention. Klarstrom, Col. 8, Ins. 34-40. There is no indication that the "small amounts" of Klarstrom are on the order of the controlled amounts of "less than or equal to 0.003 mass percent" as presently claimed. Furthermore, the contents of P, O, Mn, Cu, and Si in the cutter are all specifically controlled to result in a cutter with a high polishing and workability.

Furthermore, the hot workability of a cutter is an extremely important factor for easily and smoothly manufacturing a thin body cutter with a high production yield. The cutter "comprises a mirror-finished surface formed by final polishing with a polisher," resulting in a thinner edge. The precise composition and impurities are controlled in order to prevent cracks or damages from any inclusions and to provide a cutter capable of being easily manufactured, having a long blade durability (cutting property), and a high toughness property. See Specification, Figs. 5-7.

For at least these reasons, Applicants submit that the rejection based upon the combination of Grant, Material Hardness, and Klarstrom has been overcome and ought to be withdrawn.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection under § 103.

CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith,

Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 7/30/08

By P.D.S.

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